From: Anthony W. Youngman
To: 'microsoft.atr(a)usdoj.gov'
Date: 1/11/02 8:57am
Subject: Comments on the antitrust suit

Please find attached a document with my comments on the suit, as per the Tunney act.

You may notice I'm a UK citizen, but as this case has international repercussions and my competition authorities are likely to get involved when the DoJ decides it's closed the case, I trust my input may have some merit.

Yours,
Anthony Youngman

CC: 'dennispowell(a)earthlink.net'

Critique on the Microsoft Settlement

Reading the Proposed Final Judgment and the Competitive Impact Statement, I am somewhat disturbed at what appears to be contained therein in places.

CIS II (Overview of Relief) looks pretty impressive. However, on reading the Judgement, those "strong enforcement provisions" boil down to the one line in IV.A.4 of "The Plaintiffs shall have the authority to seek such orders as are necessary from the Court to enforce this Final Judgement ...". Given the problems enforcing the 1995 Consent Decree I expect that these strong provisions will prove very weak. Don't forget, again with the 1995 decree, that Judge Sporkin refused to sign the decree, and it was signed by Judge Jackson instead. Judge Jackson's obvious frustration at Microsoft during the current case probably stems at least in part from the realisation of how easily Microsoft skated round and bypassed the 1995 decree. Isn't the current case dealing with exactly the consequences that the 1995 case was intended to prevent?

It also concerns me that Microsoft has been convicted of breaking the law. Yet there is no attempt whatsoever at punishment. It is wealth that gives Microsoft its power. That wealth has been gained at least in part illegally. That wealth can be used to ensure that Microsoft survives the five years of the judgement reasonably intact, at which point it can resume all the destructive tactics it has employed in the past. This fear of Microsoft surviving the remedy phase moderately unscathed will be more than sufficient to permit Microsoft to threaten OEMs during the remedy phase - "When it's all over we'll come back and get you!". And while I can't offhand think of any examples, I have come across many examples of Microsoft continuing to behave in a reprehensible and probably illegal manner even during and after the trial. I am sure others will have provided you with examples. It is all a matter of trust and many, myself included, believe that Microsoft is a psychopathic corporation constitutionally incapable of behaving itself.

However, let's tackle my concerns over the remedy.

III. Prohibited Conduct.

A.

"Microsoft shall have no obligation to provide such a termination notice ... that has received two or more such notices ...". Justified, unjustified, questionable notices? On a simplistic reading, Microsoft is likely to make a point of quibbling at every possible opportunity. Past performance leads me to expect Microsoft to pick fights with any OEM it expects to have difficulty with, specifically to get itself in a position where it can invoke this clause. This needs to be tightened up severely.

B.

I fail to see how this protects the consumer and prevents the illegal practice of "per processor" licensing. One of most telling and effective ways that the IBM monopoly was broken was when they were forced to price hardware and software separately. Given that Windows is now supplied for the most part as a "recovery disk" which restores the hard disk to "factory fresh" condition, it should be a condition that OEMs are charged only for copies of Windows supplied to consenting customers. How hard is it for a consumer to switch on a bare pc, put the recovery CD in the CD drive, and watch the computer "recover" itself to a "factory fresh install state"? I have

no problems with Microsoft obliging OEMs to ship their PCs with an Operating System included as part of the package, just as long as this includes the obligation to offer a non-Microsoft alternative. After all, what is marginal cost of throwing in a Debian CD?

C.

"Microsoft shall not restrict by agreement any OEM licensee ...". Why is this section so much weaker than the wording at III.A.? You need to add wording forbidding technical or other measures as well! Bear in mind Microsoft has already used technical measures to destroy the ability of PCs to dual-boot, any repetition of this needs to be nipped in the bud. When you install NT4, it nags you to be allowed to write a "signature" to the start of the disk. If you let it, this will destroy older versions of lilo, the default linux boot manager. The cynical amongst us might assume that this was deliberate... It is thought Microsoft is planning similar tactics for when PCs migrate to the IA64 architecture (Intel's x86 replacement), and with its current recovery disk practice it has already implemented something similar. If you are forced to reinstall Windows (a not uncommon occurrence) a "recovery" will wipe any changes you have made to your system, including any third-party Operating System you may have installed. The sheer hassle of reinstalling linux every time Windows breaks is enough to put a lot of people off. And Microsoft has already introduced a new disk format which (intentionally?) prevents any other Operating System from sharing the disk. It is suspected that this will be the only format acceptable with the new IA64 generation of CPUs.

If Microsoft does that, the provisions granted to OEMs in section 4 will be worthless, because it will be technically impossible despite the fact that it is contractually possible. You need to add wording similar to the following:

"Both when being installed/restored and in normal/abnormal usage, Windows must restrict itself to the portion of disk allocated to it by the user. It may not assume that that portion is the entire disk unless it has positively detected the absence of any third-party boot loader or Operating System. It must also provide a mechanism whereby any third party can invoke the Windows loader similar to the existing boot mechanism where a loader loads and executes the first 512 bytes at the start of the disk or partition."

E.

"Microsoft shall make available ... for the sole purpose of interoperating with a Windows Operating System Product, on reasonable and non-discriminatory terms...". In other words, Microsoft are free to discriminate against their sole surviving real competition, Open Source. By definition, any "for cost" licencing scheme discriminates against Open Source.

This section should be rewritten to say something along the lines of "Microsoft shall publish and make freely available a formal description of any protocol used by a Windows Client to communicate with a Windows server. Microsoft are free to forbid the use of their Intellectual Property to be used to enable two non-Windows systems to communicate, or to forbid the use of their Intellectual Property without the appropriate CAL (Client Access Licence). Any such CAL must be Operating System agnostic, and be supplied and charged separately from the Windows Client."

After all, to permit otherwise is surely the equivalent of allowing the English Language to be

patented? And isn't it, actually, also illegal under US Federal law? I thought it was illegal to word "requests for procurement" in such a manner as only one company's goods fitted the bill. Without a clause such as thin, any requirement of Microsoft compatibility would effectively require the use of Microsoft software and as such would be illegal.

As I've worded it, there is no restriction on competitors making their software speak the same "language" (as indeed there should not be), but it is perfectly possible for Microsoft to charge a fair fee for the use of any of their Intellectual Property. Very similar, in fact, to Hewlett-Packard's Open Source printer drivers which declare prominently "For use with HP printers only. Usage with any other make of printer may infringe third-party Copyright and/or Licence agreements".

By placing the obligation on the user to have a valid usage licence (eg a CAL) we can sidestep any argument over what is "reasonable and non-discriminatory".

I notice also that the Competitive Impact Statement mentions Kerberos in this section. Interestingly enough, Microsoft has already attempted to subvert Kerberos once yet this section would have minimal effect on the tactic used. Windows 2000 client authenticated perfectly to a Unix Kerberos server, yet when the Windows 2000 client was granted authorisation, it threw it away because the server wasn't a Windows 2000 server. And again, if developers are licenced, who is going to pay for a licence to distribute MS-Kerberos for linux? More reason to say the specification must be openly published and the licence fee charged to the user. Interestingly enough, Microsoft didn't use the patent/copyright trick to attempt to prevent reverse-engineering of their extensions. They wrapped the document with a licence agreement that said "if you wish to read the spec, you must agree not to implement a non-Microsoft implementation". If enforced, it would have had the effect of making non-MS servers incompatible because the client would refuse to use them, and there would have been nothing the server software authors could have done about it.

H.

1. "Enable or remove access to each Microsoft Middleware Product". Taken in conjunction with the (implied) requirements of section D, that Microsoft Middleware should not have an unfair advantage, these two requirements are mutually incompatible!

Large chunks of Microsoft Middleware are implemented as part of the OS for a reason - they are loaded in RAM when the computer starts up, and they stay there. This means that, for example, Internet Explorer will always appear to load faster than Netscape Navigator, because large chunks of it are already loaded.

Microsoft are also permitted to use their own middleware to launch, for example as mentioned by the Competitive Impact Statement, ActiveX (should the user's chosen alternative not include that capability). But what if I the user chose that alternative precisely **because** it did not include the capability? Should Microsoft have the right to demand that I have the capability to execute ActiveX, even if I wish to delete it on security grounds?

This section should demand that users are allowed to de-install and delete Microsoft Middleware. It may not be advisable, and it may result in large chunks of functionality disappearing, but if the user does not want that functionality they should be allowed to get rid of it. Completely. Totally. Utterly. To allow otherwise is to allow Microsoft to continue its current practice of forcing

unwanted software onto non-consenting consumers, and if that software has major security holes (like ActiveX, for example) then this is a serious issue.

And as has been suggested in various places by other people, it should be possible to get and install a "Windows Lite" which is cheaper and comes without middleware.

J. No provision of this final Judgement shall:

THIS SECTION IS EXTREMELY WORRISOME !!!

Firstly, secrecy and security are mutually exclusive. If Microsoft needs to invoke this section then it is a pretty sure-fire conclusion that the "security" implemented by the relevant APIs is shoddy and easy to break. In which case, this section should not cover it.

Given Microsoft's extremely shoddy security in the past, it should in fact be a requirement that all security protocols, interfaces and APIs are published and disseminated widely almost from the moment Microsoft start developing them.

One only needs to look at the current DMCA/FBI/ElcomSoft case to see how secrecy is incompatible with security. Some unknown Adobe programmer took a well-known security algorithm. It had several traits in common with Enigma which could easily have defeated "kiddie" cryptographers. And don't forget, Enigma was strong enough to frustrate the most powerful computers available in the early 1940s - they typically broke only 75% of messages. Okay, Adobe's method wasn't quite as strong as Enigma...

But this unknown programmer thought he'd be clever and add a few tweaks... and succeeded in converting this technique into a Caesar cipher. This is so weak a kid can break it using pen and paper alone in half an hour - I should know - I've done exactly that and I wasn't even a teenager at the time.

This section should not permit Microsoft to use security as a pretence for secrecy in any shape or form whatsoever.

To my mind, this judgement is almost too prescriptive, allowing too much interference in Microsoft's internal affairs. It also does little to assist competition on its merits. I personally would like to see a simple remedy along the following lines:

To restore competition generally:

Microsoft is forbidden from entering into any OEM contracts whatsoever. It must publish a price list and stick to it, but that price list may include reasonable volume discounts to take into account the economies of volume where an OEM buys a lot of copies. The price of bundled middleware and applications should also be reasonably comparable with the price of the same software as a stand-alone or upgrade purchase.

The problem with having "Covered OEMs" is that Microsoft can to some extent control who is in which group. By having a noticeable differential between the two covered groups and "the small guys" Microsoft can make it very difficult for any individual OEM to move into a more favourable category. This way, if a small OEM makes good PCs, they can grow and at the same time provide the OS of the customer's choice without fear that the system is susceptible to being rigged. If customers want Windows, they can buy it from the OEM, or as seems more and more to be the case, they can enter into a direct licencing agreement with Microsoft themselves. We **need** a means whereby small OEMs with no affinity to Microsoft can seriously threaten the Dells and Compaqs. Without this, the fear of future retaliation keeps the big OEMs in line, while preferential treatment of large OEMs by Microsoft keeps the small boys from getting bigger. And at the end of the decree, we will still have the problem where OEMs say "how high" when asked by Microsoft to jump.

Microsoft may establish OEM programs where entry is open at reasonable and non-discriminatory terms to anyone who wishes to ensure their hardware works successfully with Windows Operating Systems. Such programs may not require any degree of control by Microsoft over the hardware vendor's Intellectual Property, and in particular may not seek to hide hardware specifications by way of Non-Disclosure-Agreements.

At the moment, linux in particular is hamstrung by the difficulty of getting information from manufacturers. Hewlett-Packard is a case in point, where it has been (officially?) quoted that for certain HP printers, HP was contractually prevented from telling customers how they worked. So if something changed on your computer and the printer stopped working, all you were suddenly left with was an expensive doorstop despite the fact there was no problem with the printer itself.

Microsoft Operating Systems must not assume or demand sole control of the computer systems on which they run, or interfere with third-party software installed elsewhere on the system.

As mentioned above. If Microsoft software assumes sole ownership of the computer it is free wilfully to destroy anything else the user may have installed. This is just plain unacceptable.

Microsoft must publish all APIs, protocols, interfaces and file formats that they provide or use - in other words, the "language" of Microsoft computing. By definition, writing an alternative implementation is not a breach of copyright. By definition, if it is encumbered by patents it cannot be an Open Standard suitable for implementation by Government. And if there are any

intellectual property issues, these should be addressed by the sale of user licences, which must be priced independently of the operating system on which the software runs. Bearing in mind I thought Federal Procurement Regulations required open standards, I would have thought Microsoft should already be complying with this requirement if they wish their software to be used for Federal Government Business.

It should be a mandatory requirement that all protocols used by Microsoft Software to communicate between computers must be clearly and publically documented such that a competitor can implement a compatible equivalent. Please note that it says by implication "all software" so that communication between databases, between mail client and server, etc is all caught.

It should also be a mandatory requirement that all file formats used for transferring information between users must be clearly and publically documented such that a competitor can implement a compatible equivalent. Here we may have a patent problem, but I would have thought any attempt to obstruct compatibility was a clear breach of competition law, and possibly a breach of the constitutional justification for patents.

I'm less sure of requiring Microsoft to document internal formats such as the NTFS file system, the internal layout of their SQL-Server database, or their Exchange database. There are very good technical reasons to say they should, but I'm not sure that there are good competitive anti-trust reasons to do so.

Any such documentation must be released at least six months before the Software in question is Released To Manufacturing (RTM), and also no later than the date Microsoft start shipping the software to testers outside of Microsoft or OEM employees. RTM is defined as no later than the date Microsoft permit OEMs to ship the software to customers, or the date on which Microsoft implement a pricing regime that covers more than the cost of pressing and shipping the distribution media. The documentation must be included with the software without NDAs or restrictive licences.

Enforcement should be open to anyone. If Microsoft releases software in contravention of the decree, then anybody can act as plaintiff and seek a Federal restraining order barring distribution of the software. Upon production of sufficiently compelling evidence, then the Federal court **will** grant the order.

This remedy is actually pretty similar to the one applied to IBM. Effectively, it requires products to be unbundled, and specifications to be produced to enable competitors to have a level(ler) playing field. It should be a requirement that competition is restored before the order is lifted. At present all Microsoft need do is bide their time, and they have plenty of cash in the bank with which to do so.

These comments have been submitted by Anthony Youngman, a Programmer/Analyst and Database Administrator/Programmer based in London, England. Contact details:

Anthony Youngman
9 Shaw House
Victoria Street
Upper Belvedere
Kent DA17 5NA
United Kingdom

Office tel: +44 20 7351 5000
Office fax: +44 20 7351 9396